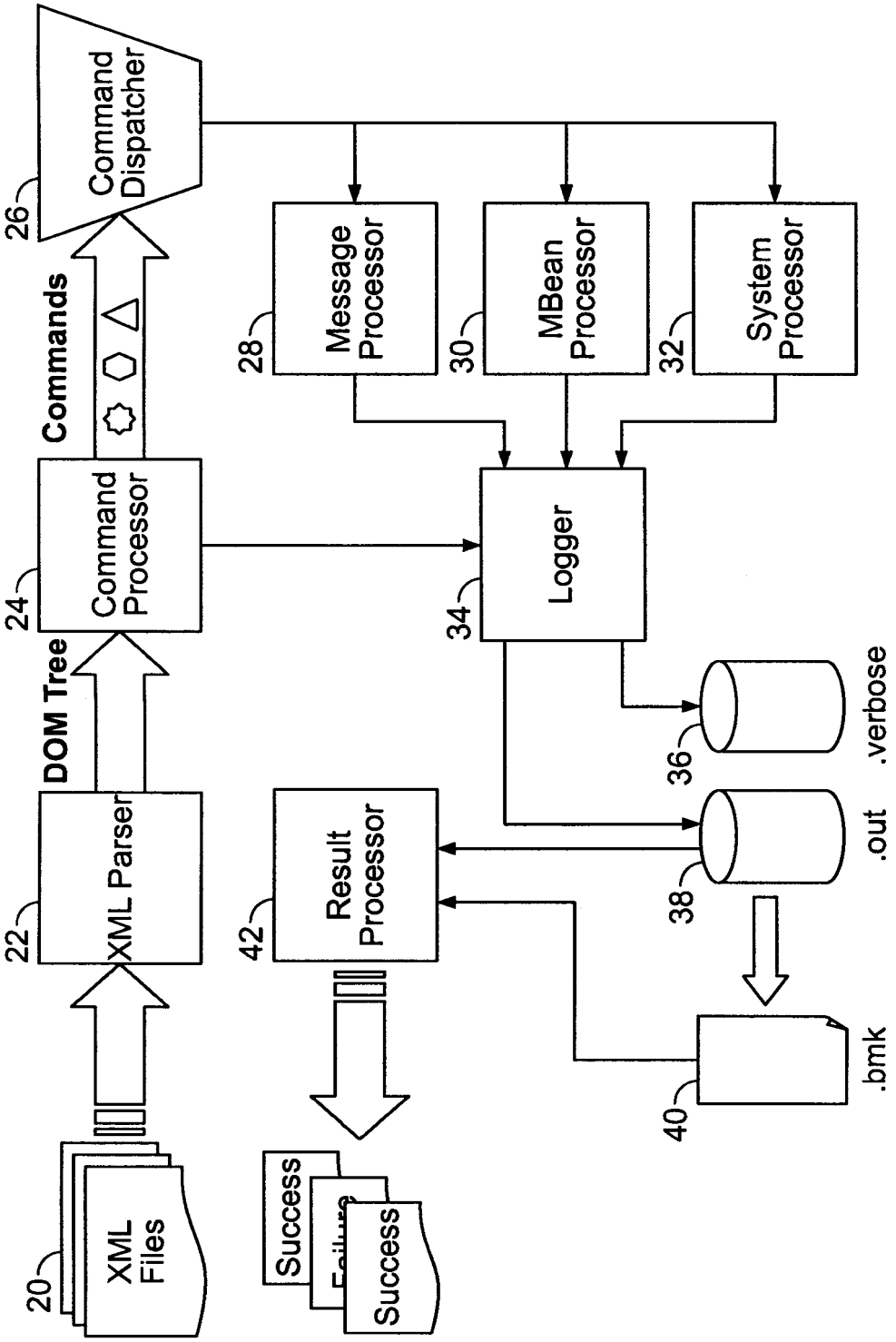
Command Dispatcher
26
Commands
Message Processor
28
MBean Processor
30
System Processor
32
Command Processor
24
Logger
34
DOM Tree
XML Parser
22
Result Processor
42
36
.verbose
38
.out
40
.bmk
XML Files
20
Success
Success

FIG. 1

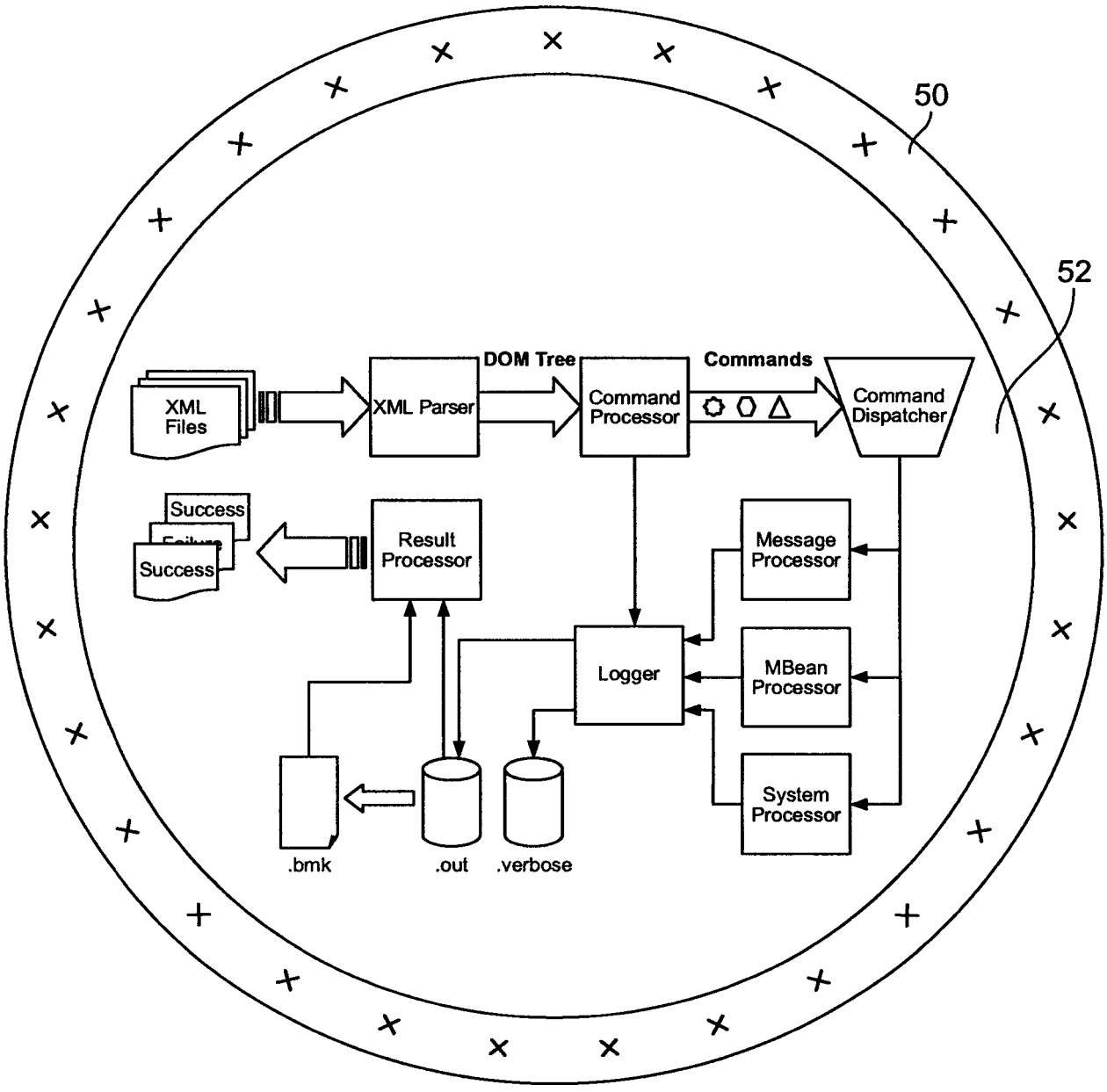
50
52
XML Files
XML Parser
DOM Tree
Command Processor
Commands
Command Dispatcher
Success
Success
Result Processor
Message Processor
Logger
MBean Processor
System Processor
.bmk
.out
.verbose

FIG. 2

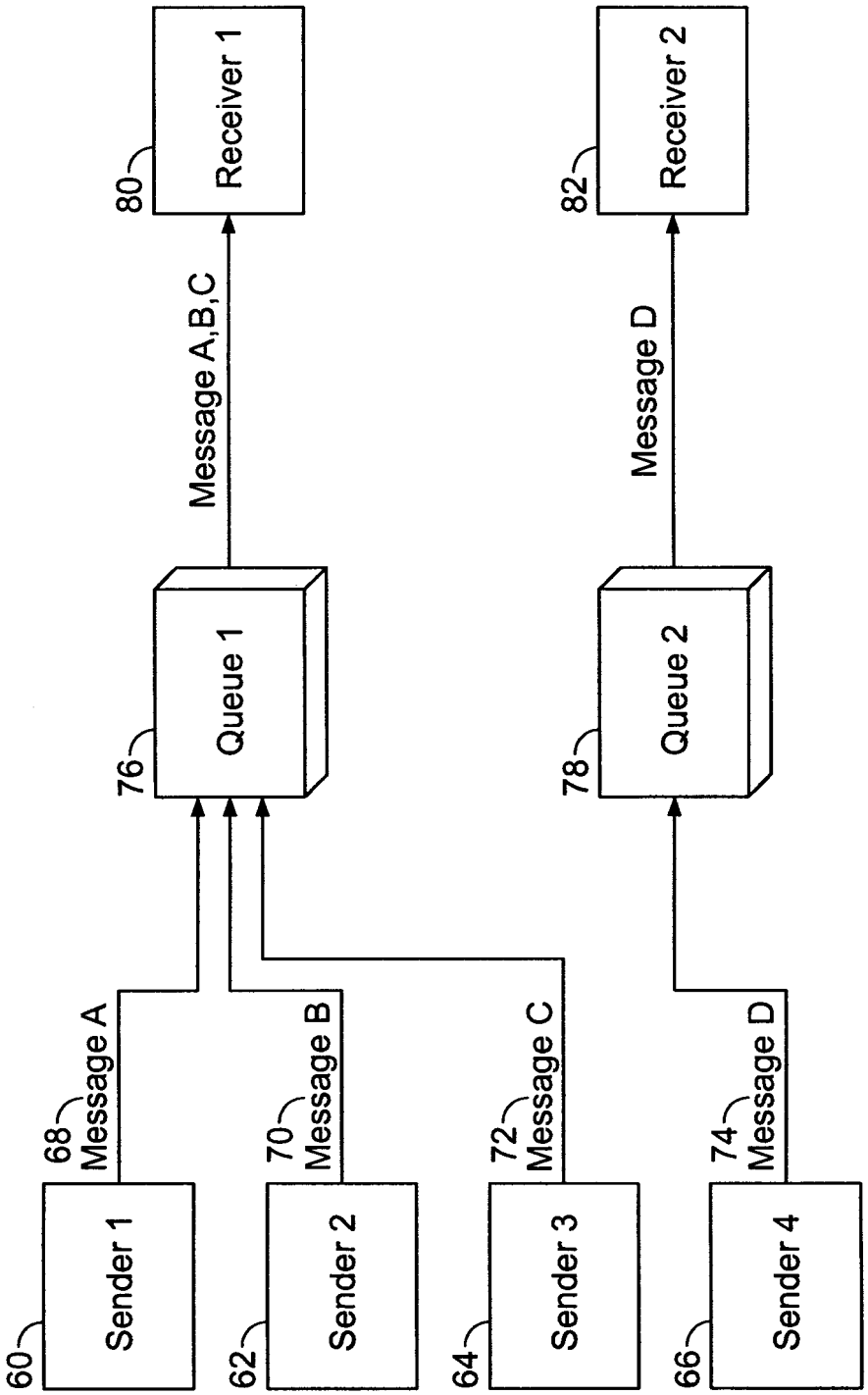
Receiver 1
80
Receiver 2
82
Message A,B,C
Message D
Queue 1
76
Queue 2
78
68
Message A
70
Message B
72
Message C
74
Message D
Sender 1
60
Sender 2
62
Sender 3
64
Sender 4
66

FIG. 3

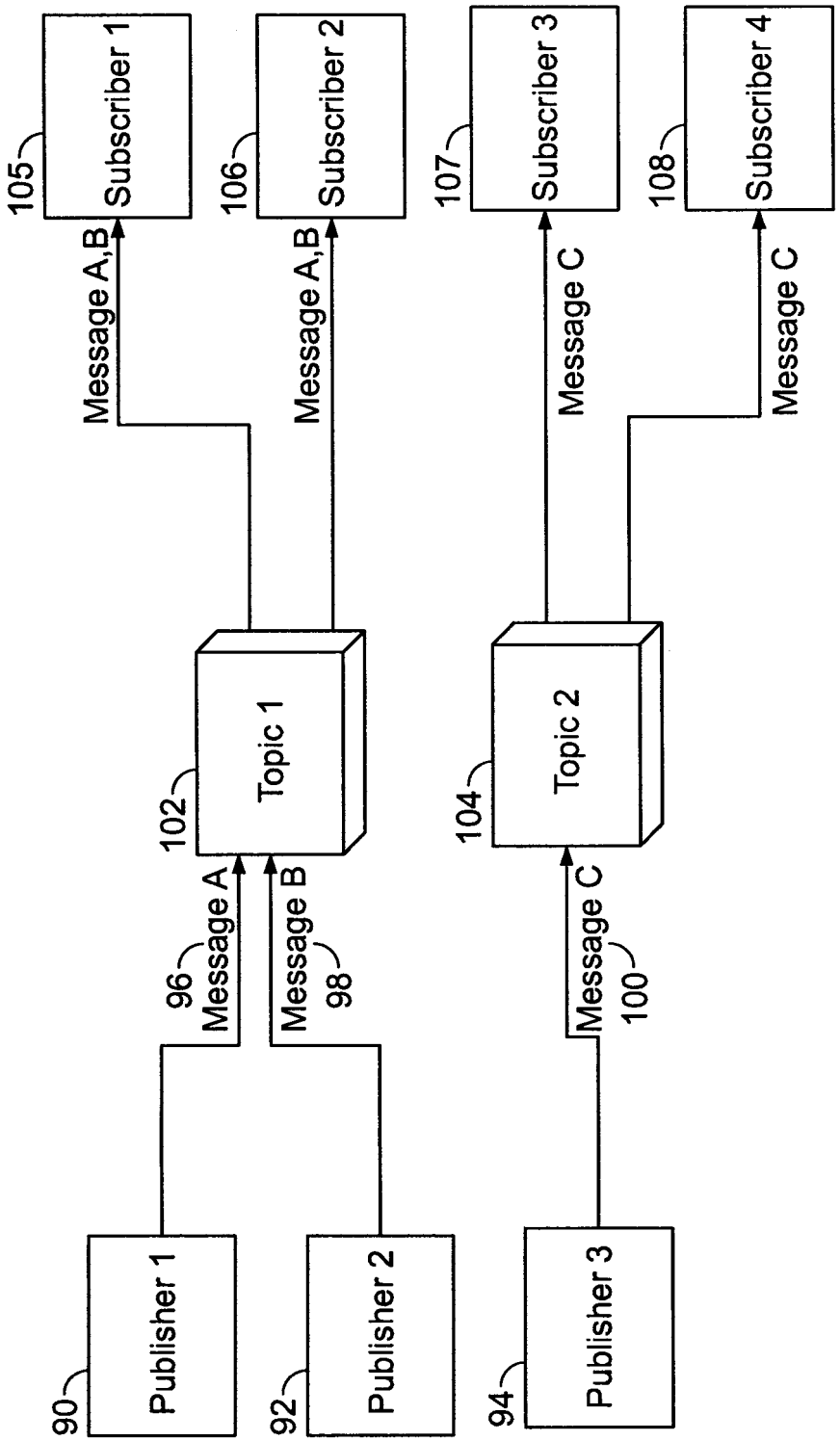
Subscriber 1
105
Subscriber 2
106
Subscriber 3
107
Subscriber 4
108
Message A,B
Message A,B
Message C
Message C
Topic 1
102
Topic 2
104
96
Message A
Message B
98
Message C
100
Publisher 1
90
Publisher 2
92
Publisher 3
94

FIG. 4

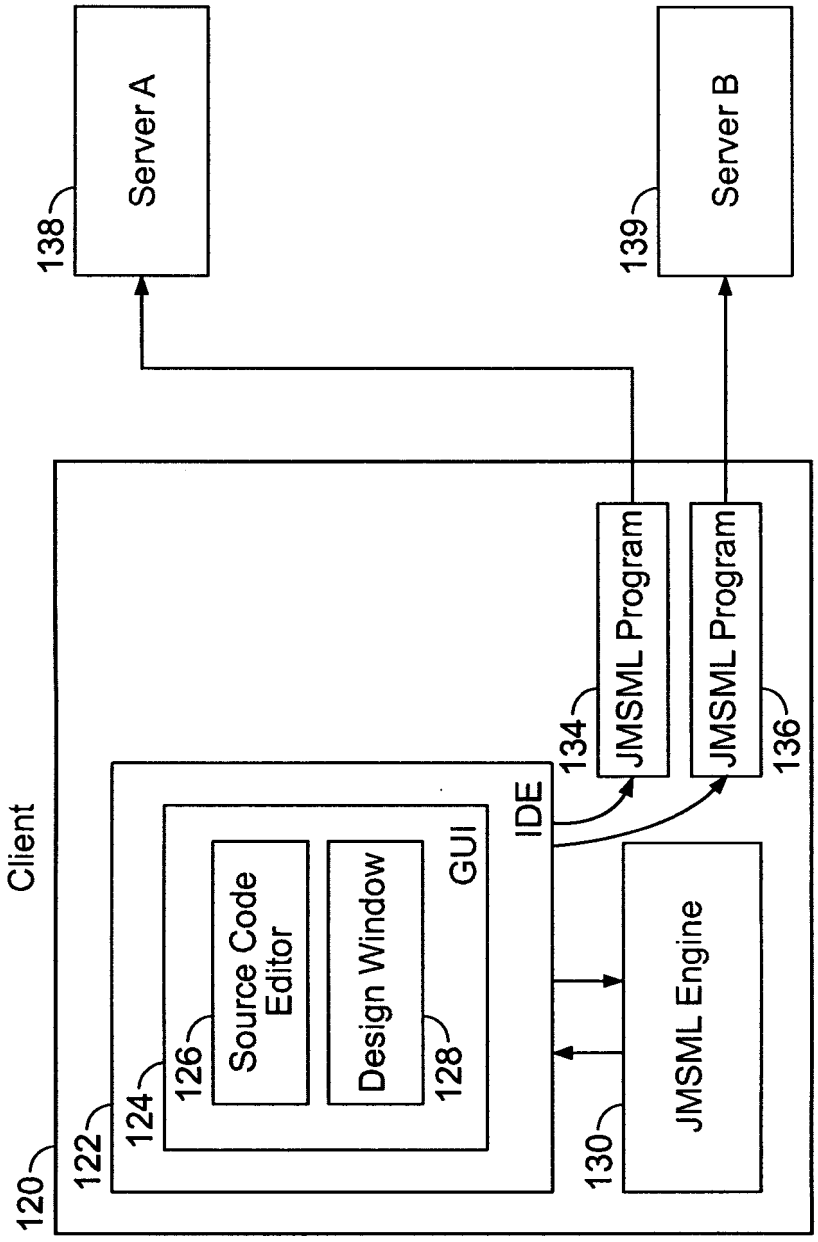
Server A
138
Server B
139
Client
120
122
124
126
Source Code Editor
Design Window
128
GUI
IDE
130
JMSML Engine
134
JMSML Program
136
JMSML Program

FIG. 5

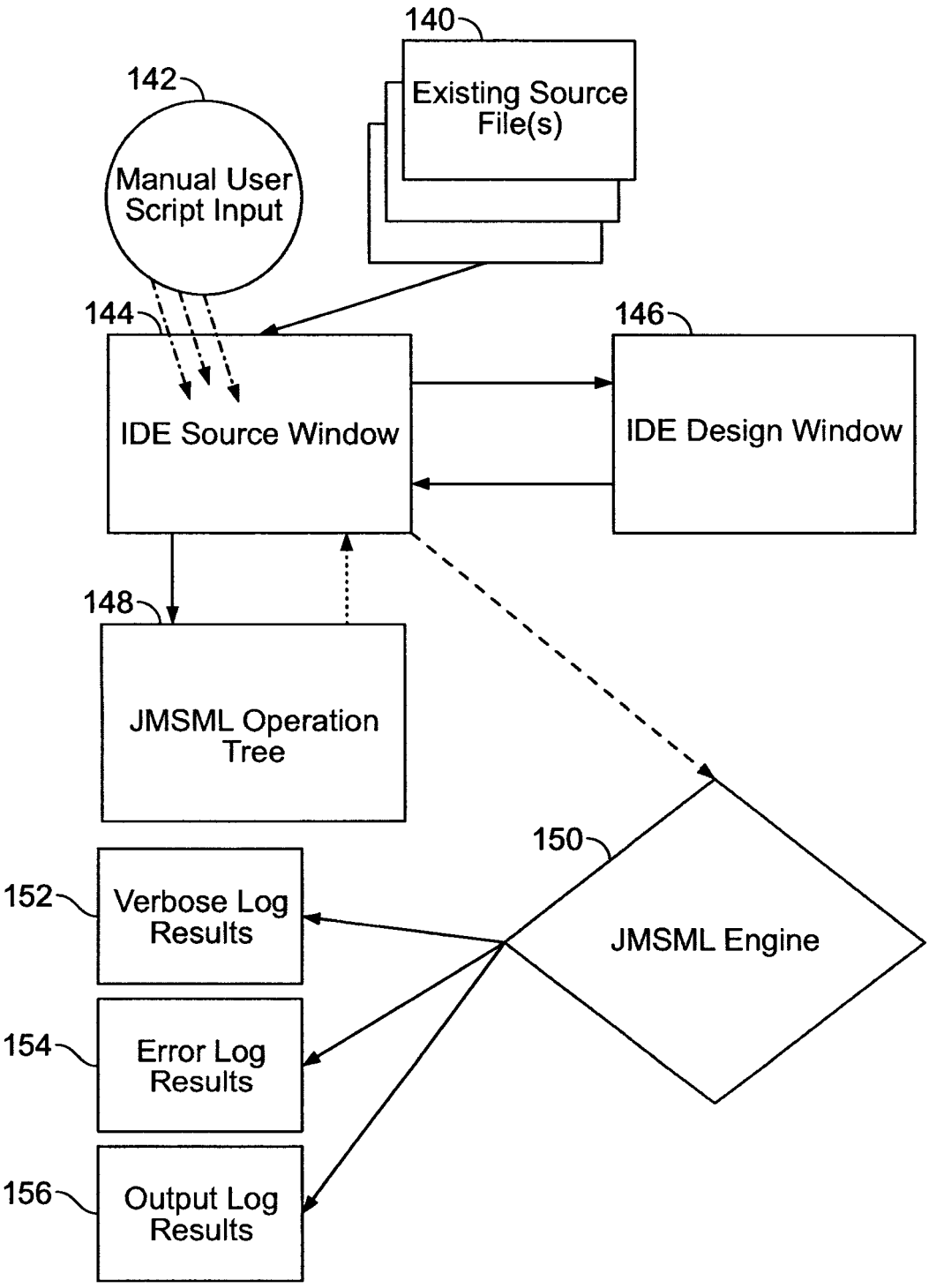
140
Existing Source File(s)
142
Manual User Script Input
144
IDE Source Window
146
IDE Design Window
148
JMSML Operation Tree
150
JMSML Engine
152
Verbose Log Results
154
Error Log Results
156
Output Log Results

FIG. 6

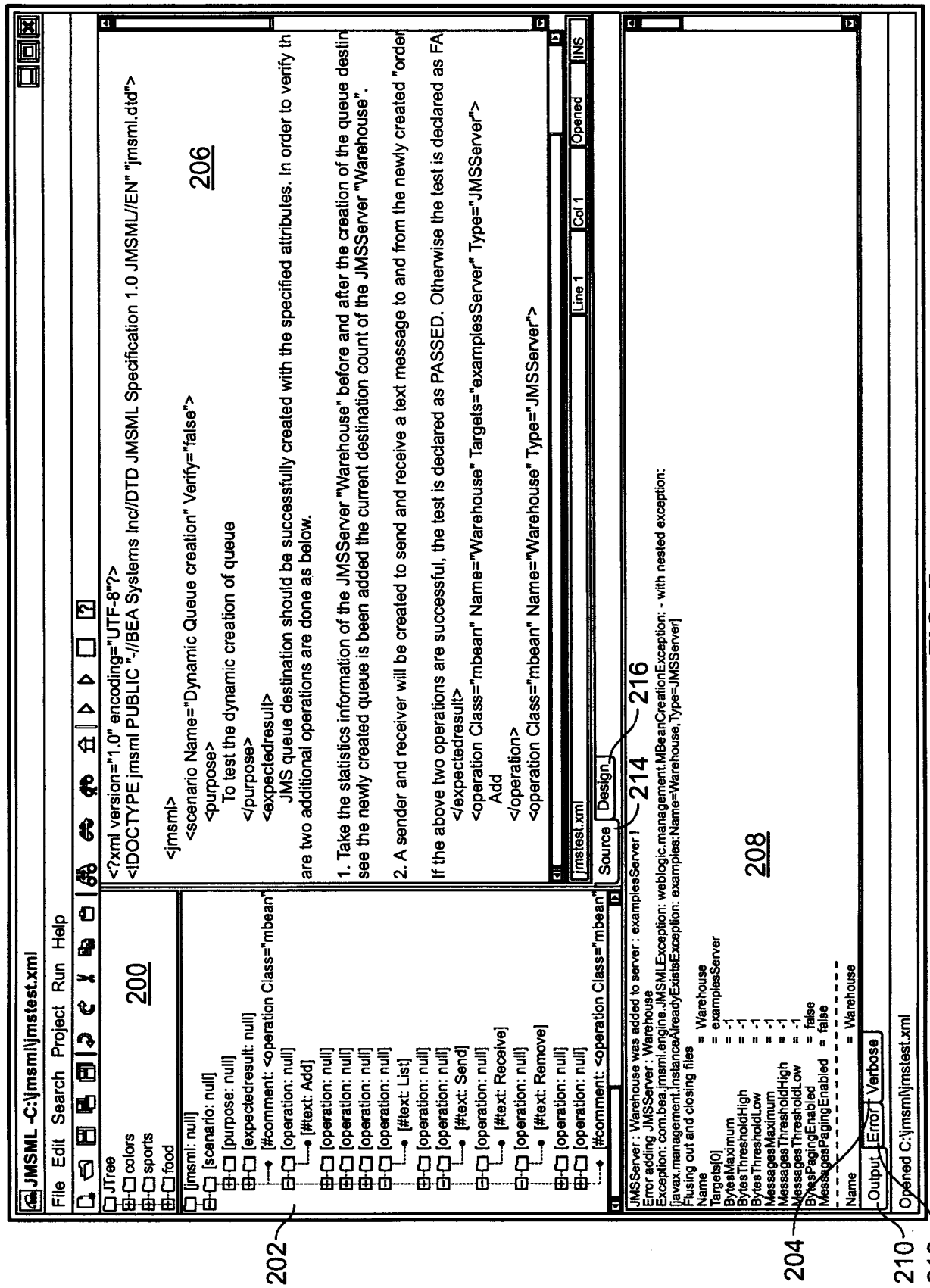
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
200
[jmsml: null]
[scenario: null]
[purpose: null]
[expectedresult: null]
#comment: <operation Class="mbean"
[operation: null]
[#text: Add]
[operation: null]
[operation: null]
[operation: null]
[operation: null]
[#text: List]
[operation: null]
[operation: null]
[#text: Send]
[operation: null]
[#text: Receive]
[operation: null]
[#text: Remove]
[operation: null]
[operation: null]
#comment: <operation Class="mbean"
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE jmsml PUBLIC "-//BEA Systems Inc//DTD JMSML Specification 1.0 JMSML//EN" "jmsml.dtd">
<jmsml>
<scenario Name="Dynamic Queue creation" Verify="false">
<purpose>
To test the dynamic creation of queue
</purpose>
<expectedresult>
JMS queue destination should be successfully created with the specified attributes. In order to verify th
are two additional operations are done as below.
1. Take the statistics information of the JMSServer "Warehouse" before and after the creation of the queue destin
see the newly created queue is been added the current destination count of the JMSServer "Warehouse".
2. A sender and receiver will be created to send and receive a text message to and from the newly created "order
If the above two operations are successful, the test is declared as PASSED. Otherwise the test is declared as FA
</expectedresult>
<operation Class="mbean" Name="Warehouse" Targets="examplesServer" Type="JMSServer">
Add
</operation>
<operation Class="mbean" Name="Warehouse" Type="JMSServer">
206
jmstest.xml
Line 1
Col 1
Opened
INS
Source
Design
214
216
JMSServer : Warehouse was added to server : examplesServer !
Error adding JMSServer : Warehouse
Exception: com.bea.jmsml.engine.JMSMLException: weblogic.management.MBeanCreationException: - with nested exception:
[javax.management.instanceAlreadyExistsException: examples:Name=Warehouse,Type=JMSServer]
Flusing out and closing files
Name = Warehouse
Targets[0] = examplesServer
BytesMaximum = -1
BytesThresholdHigh = -1
BytesThresholdLow = -1
MessagesMaximum = -1
MessagesThresholdHigh = -1
MessagesThresholdLow = -1
BytesPagingEnabled = false
MessagesPagingEnabled = false
208
Name = Warehouse
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
202
204
210
212

FIG. 7

Title: COMMAND-LINE INTERFACE SYSTEM AND METHOD FOR JAVA MESSAGE SERVICE MARK-UP LANGUAGE
Inventors: Kathiravan Sengodan
Application No.: 10/601,929 Filing Date: June 23, 2003
Docket No.: BEAS-01351US3
Attorney: Karl F. Kenna Telephone No. (415) 362-3800

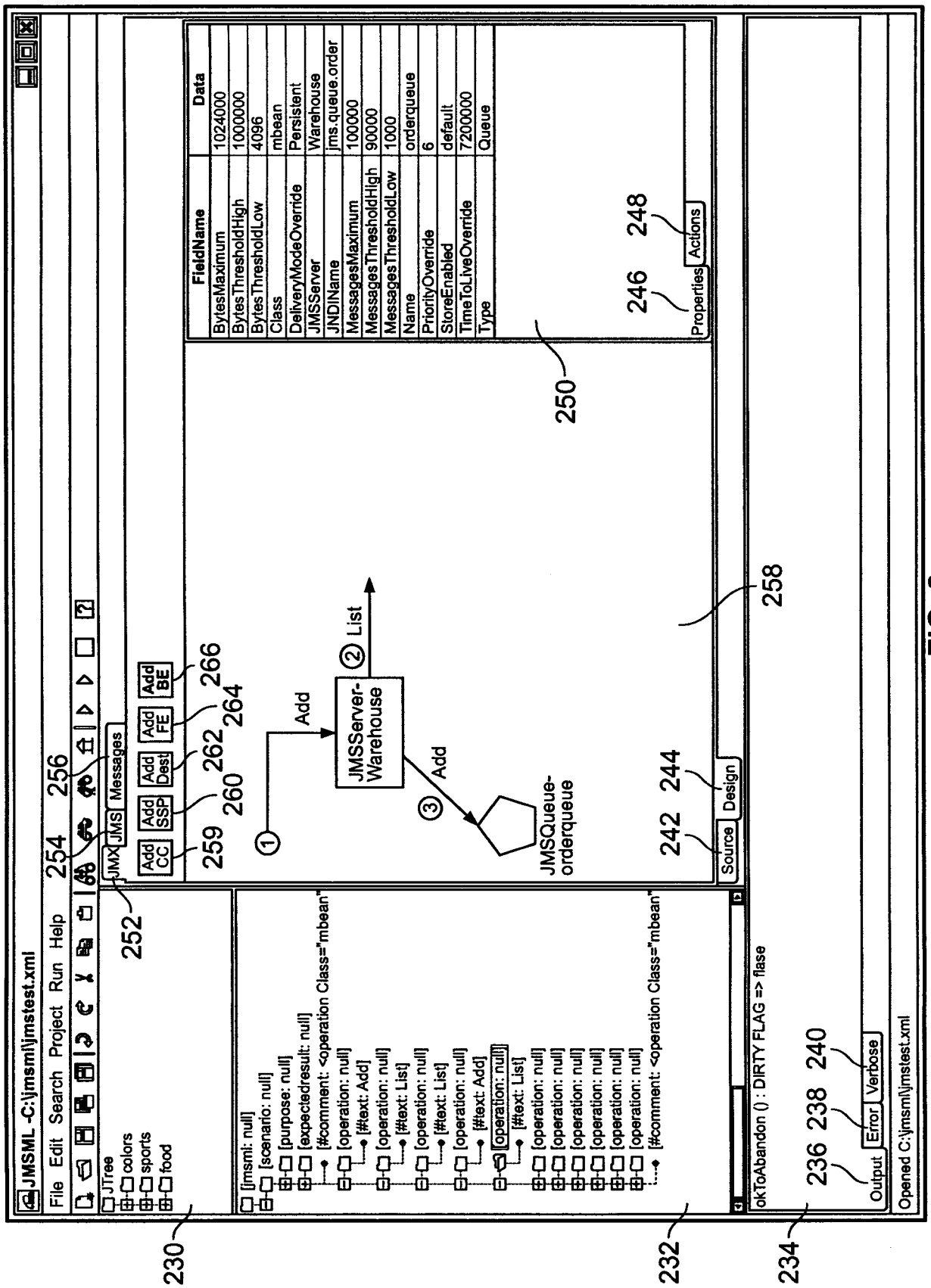

FIG. 8

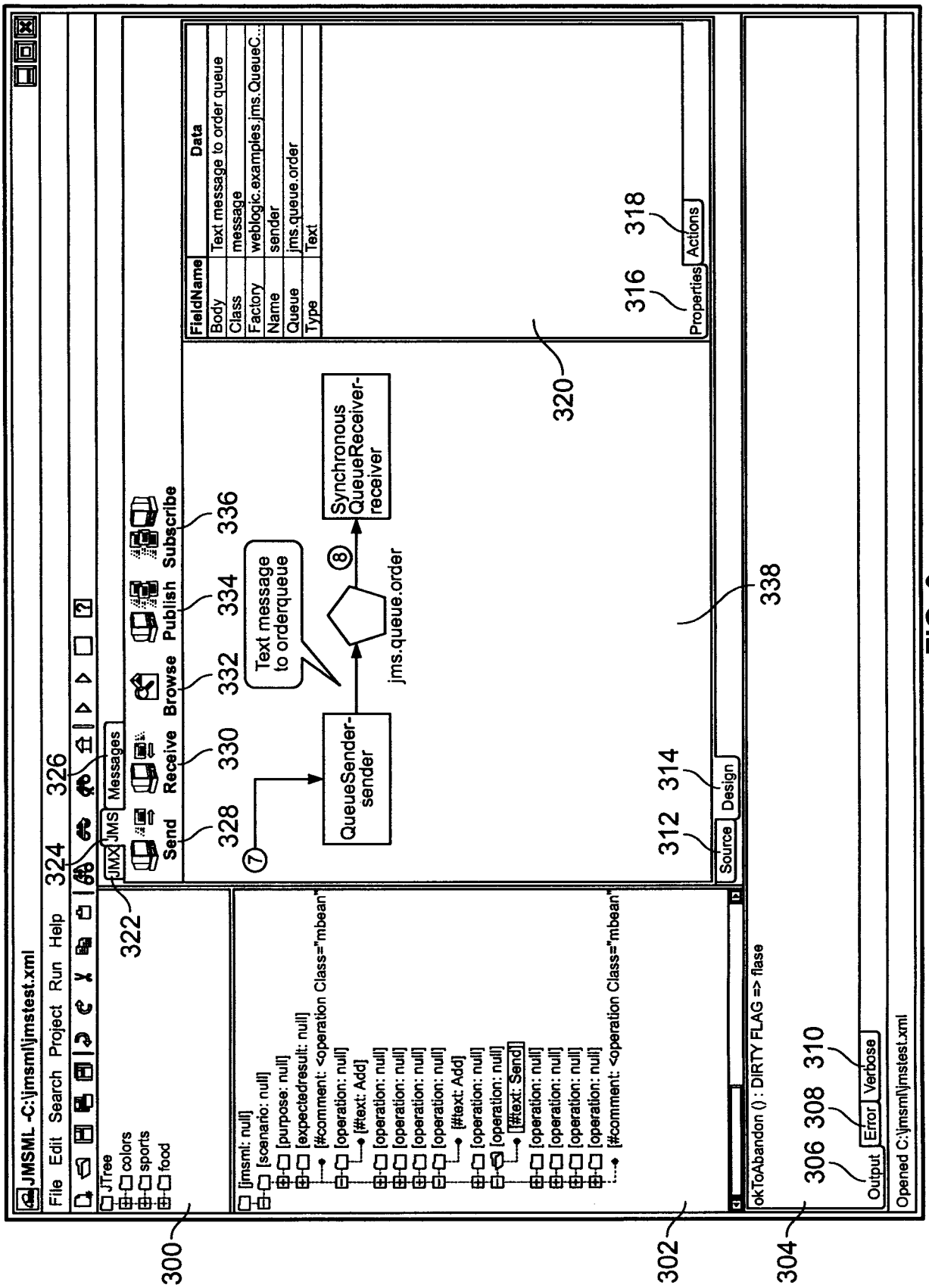
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
JMX
JMS
Messages
Send
Receive
Browse
Publish
Subscribe
QueueSender-sender
Text message to orderqueue
jms.queue.order
Synchronous QueueReceiver-receiver
FieldName
Data
Body
Text message to order queue
Class
message
Factory
weblogic.examples.jms.QueueC...
Name
sender
Queue
jms.queue.order
Type
Text
Properties
Actions
Source
Design
okToAbandon () : DIRTY FLAG => flase
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
300
302
304
306
308
310
312
314
316
318
320
322
324
326
328
330
332
334
336
338

FIG. 9

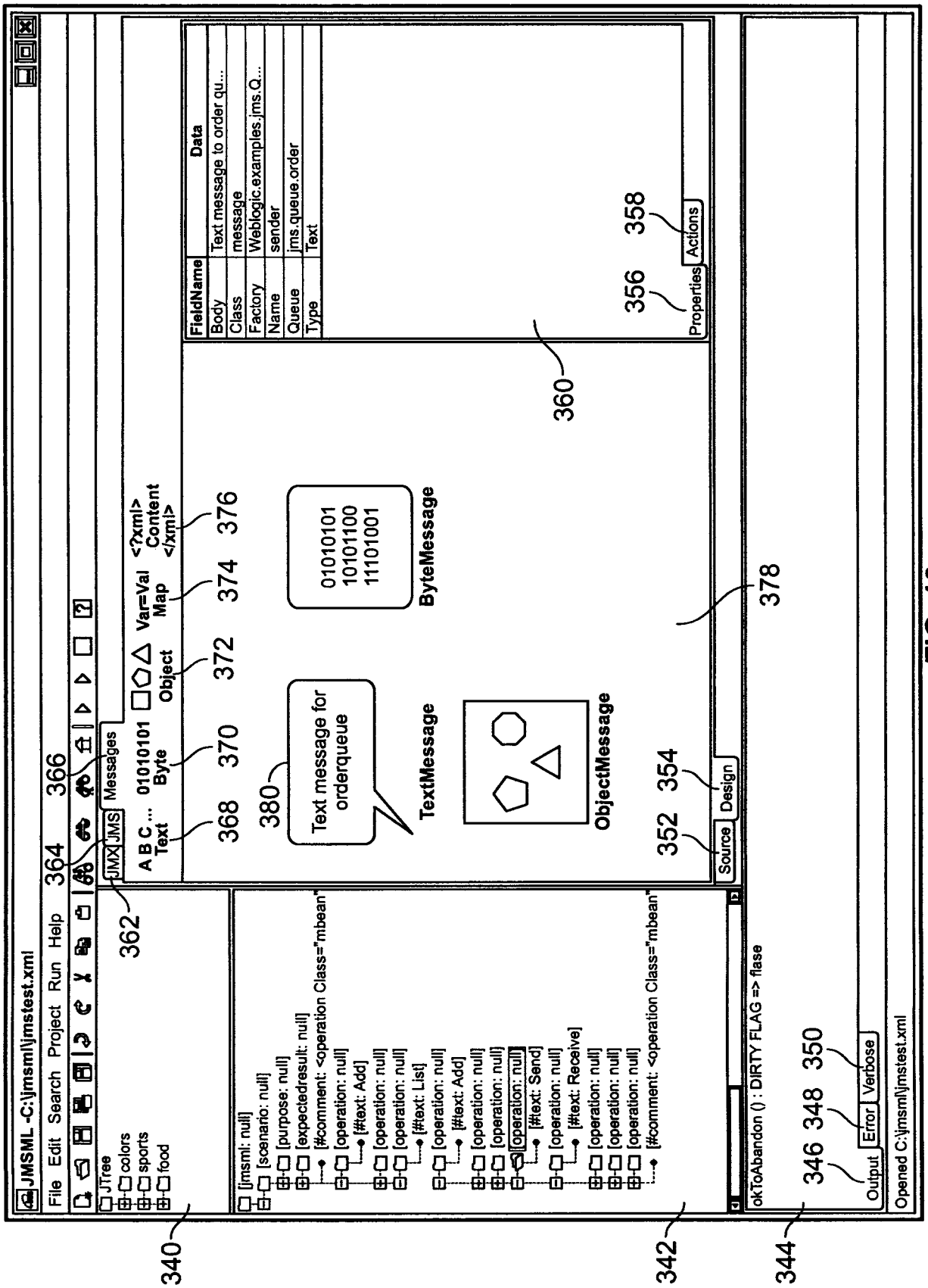
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
[jmsml: null]
[scenario: null]
[purpose: null]
[expectedresult: null]
[#comment: <operation Class="mbean"
[operation: null]
[#text: Add]
[operation: null]
[operation: null]
[#text: List]
[operation: null]
[#text: Add]
[operation: null]
[operation: null]
[operation: null]
[#text: Send]
[operation: null]
[#text: Receive]
[operation: null]
[operation: null]
[operation: null]
[#comment: <operation Class="mbean"
JMX JMS Messages
A B C ... Text
01010101 Byte
Object
Var=Val Map
<?xml> Content </xml>
Text message for orderqueue
TextMessage
01010101
10101100
11101001
ByteMessage
ObjectMessage
Source Design
FieldName Data
Body Text message to order qu...
Class message
Factory Weblogic.examples.jms.Q...
Name sender
Queue jms.queue.order
Type Text
Properties Actions
okToAbandon () : DIRTY FLAG => flase
Output Error Verbose
Opened C:\jmsml\jmstest.xml
340
342
344
346
348
350
352
354
356
358
360
362
364
366
368
370
372
374
376
378
380

FIG. 10

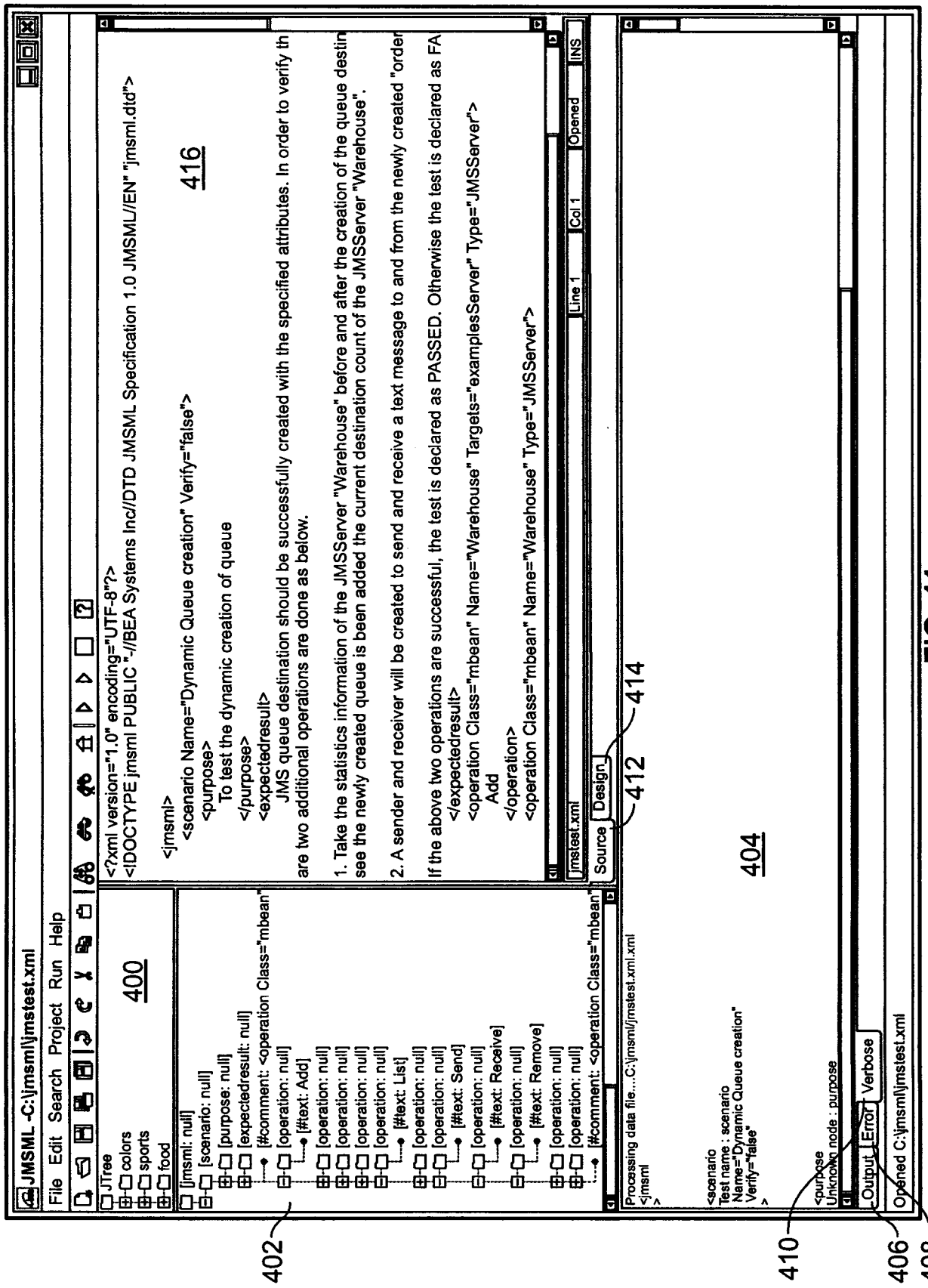
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
400
[jmsml: null]
[scenario: null]
[purpose: null]
[expectedresult: null]
#comment: <operation Class="mbean"
[operation: null]
[#text: Add]
[operation: null]
[operation: null]
[operation: null]
[operation: null]
[#text: List]
[operation: null]
[operation: null]
[#text: Send]
[operation: null]
[#text: Receive]
[operation: null]
[#text: Remove]
[operation: null]
[operation: null]
#comment: <operation Class="mbean"
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE jmsml PUBLIC "-//BEA Systems Inc//DTD JMSML Specification 1.0 JMSML//EN" "jmsml.dtd">
<jmsml>
<scenario Name="Dynamic Queue creation" Verify="false">
<purpose>
To test the dynamic creation of queue
</purpose>
<expectedresult>
JMS queue destination should be successfully created with the specified attributes. In order to verify th
are two additional operations are done as below.
1. Take the statistics information of the JMSServer "Warehouse" before and after the creation of the queue destin
see the newly created queue is been added the current destination count of the JMSServer "Warehouse".
2. A sender and receiver will be created to send and receive a text message to and from the newly created "order
If the above two operations are successful, the test is declared as PASSED. Otherwise the test is declared as FA
</expectedresult>
<operation Class="mbean" Name="Warehouse" Targets="examplesServer" Type="JMSServer">
Add
</operation>
<operation Class="mbean" Name="Warehouse" Type="JMSServer">
416
jmstest.xml
Line 1
Col 1
Opened
INS
Source
Design
412
414
Processing data file....C:\jmsml\jmstest.xml.xml
<jmsml
>
<scenario
Test name : scenario
Name="Dynamic Queue creation"
Verify="false"
>
404
<purpose
Unknown node : purpose
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
402
410
406
408

FIG. 11

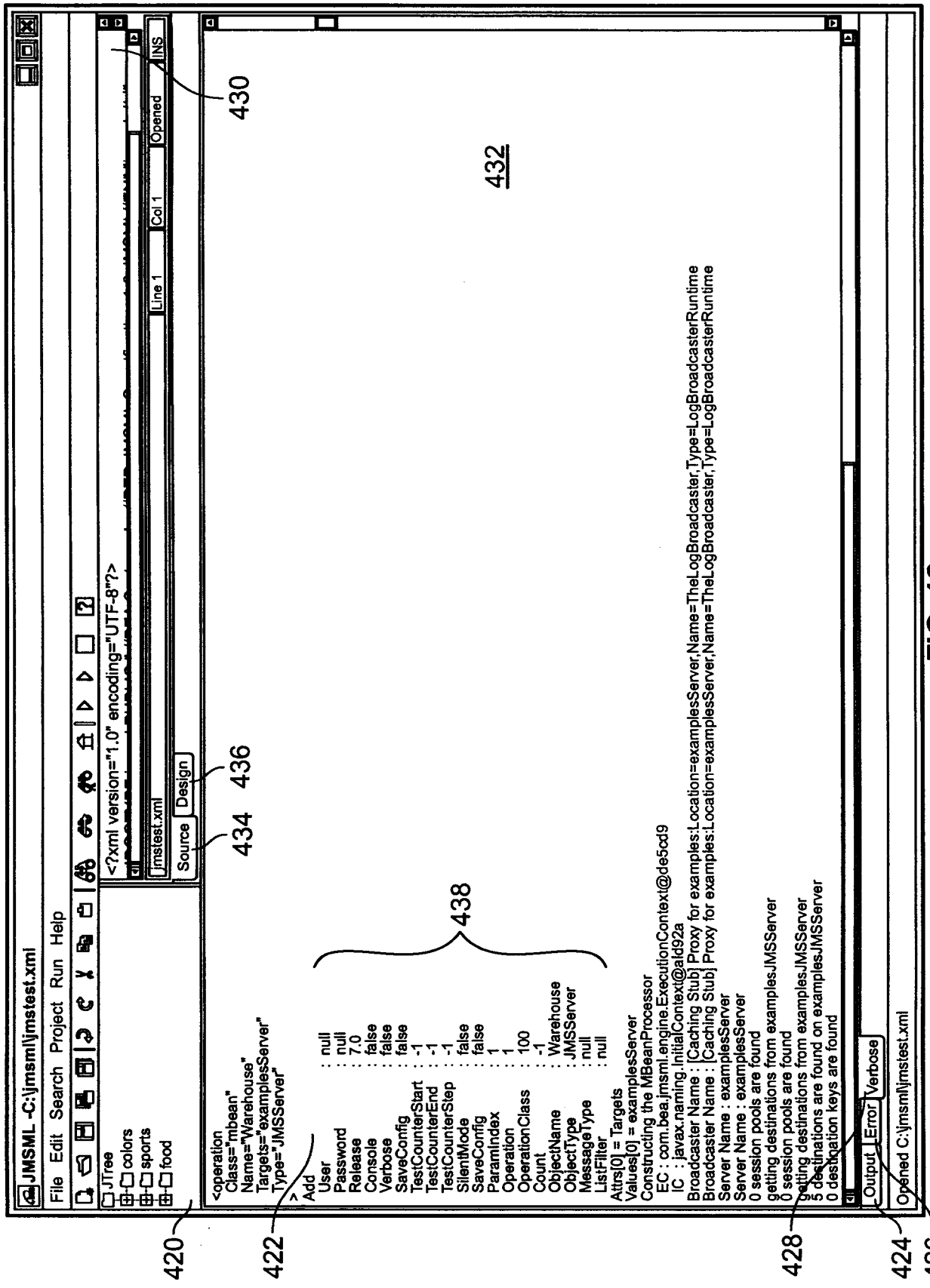
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
jmstest.xml
Source
Design
Line 1
Col 1
Opened
INS
<?xml version="1.0" encoding="UTF-8"?>
<operation
Class="mbean"
Name="Warehouse"
Targets="examplesServer"
Type="JMSServer"
>
Add
User : null
Password : null
Release : 7.0
Console : false
Verbose : false
SaveConfig : false
TestCounterStart : -1
TestCounterEnd : -1
TestCounterStep : -1
SilentMode : false
SaveConfig : false
ParamIndex : 1
Operation : 1
OperationClass : 100
Count : -1
ObjectName : Warehouse
ObjectType : JMSServer
MessageType : null
ListFilter : null
Attrs[0] = Targets
Values[0] = examplesServer
Constructing the MBeanProcessor
EC : com.bea.jmsml.engine.ExecutionContext@de5cd9
IC : javax.naming.InitialContext@ald92a
Broadcaster Name : [Caching Stub] Proxy for examples:Location=examplesServer,Name=TheLogBroadcaster,Type=LogBroadcasterRuntime
Broadcaster Name : [Caching Stub] Proxy for examples:Location=examplesServer,Name=TheLogBroadcaster,Type=LogBroadcasterRuntime
Server Name : examplesServer
Server Name : examplesServer
0 session pools are found
getting destinations from examplesJMSServer
0 session pools are found
getting destinations from examplesJMSServer
5 destinations are found on examplesJMSServer
0 destination keys are found
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
420
422
424
426
428
430
432
434
436
438

FIG. 12

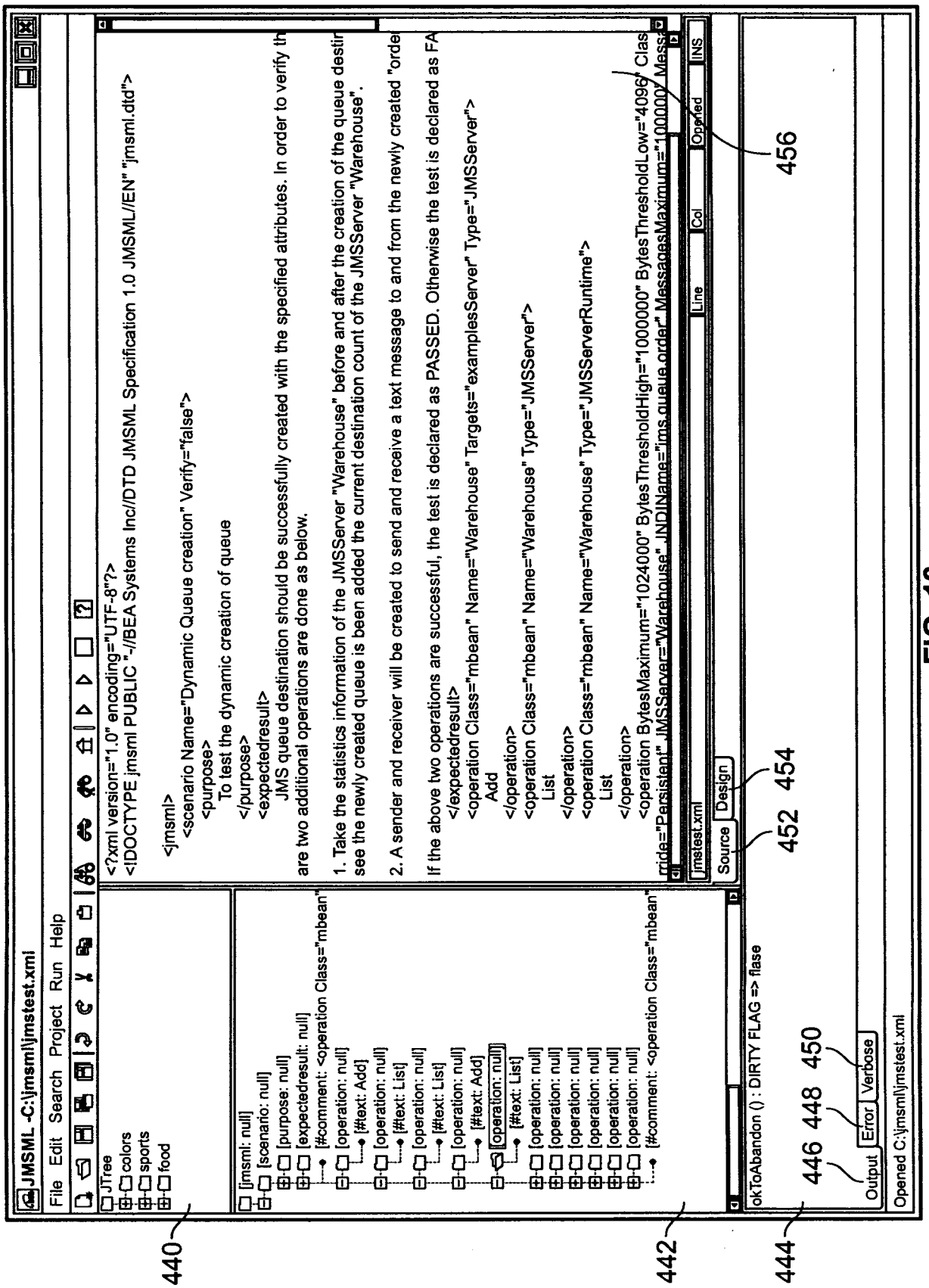
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
[jmsml: null]
[scenario: null]
[purpose: null]
[expectedresult: null]
[#comment: <operation Class="mbean"
[operation: null]
[#text: Add]
[operation: null]
[#text: List]
[operation: null]
[#text: List]
[operation: null]
[#text: Add]
[operation: null]
[#text: List]
[operation: null]
[operation: null]
[operation: null]
[operation: null]
[operation: null]
[#comment: <operation Class="mbean"
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE jmsml PUBLIC "-//BEA Systems Inc//DTD JMSML Specification 1.0 JMSML//EN" "jmsml.dtd">
<jmsml>
<scenario Name="Dynamic Queue creation" Verify="false">
<purpose>
To test the dynamic creation of queue
</purpose>
<expectedresult>
JMS queue destination should be successfully created with the specified attributes. In order to verify th
are two additional operations are done as below.
1. Take the statistics information of the JMSServer "Warehouse" before and after the creation of the queue destin
see the newly created queue is been added the current destination count of the JMSServer "Warehouse".
2. A sender and receiver will be created to send and receive a text message to and from the newly created "orde
If the above two operations are successful, the test is declared as PASSED. Otherwise the test is declared as FA
</expectedresult>
<operation Class="mbean" Name="Warehouse" Targets="examplesServer" Type="JMSServer">
Add
</operation>
<operation Class="mbean" Name="Warehouse" Type="JMSServer">
List
</operation>
<operation Class="mbean" Name="Warehouse" Type="JMSServerRuntime">
List
</operation>
<operation BytesMaximum="1024000" BytesThresholdHigh="1000000" BytesThresholdLow="4096" Clas
rride="Persistent" JMSServer="Warehouse" JNDIName="jms.queue.order" MessagesMaximum="1000000" Messa
jmstest.xml
Source
Design
Line
Col
Opened
INS
okToAbandon () : DIRTY FLAG => flase
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
440
442
444
446
448
450
452
454
456

FIG. 13

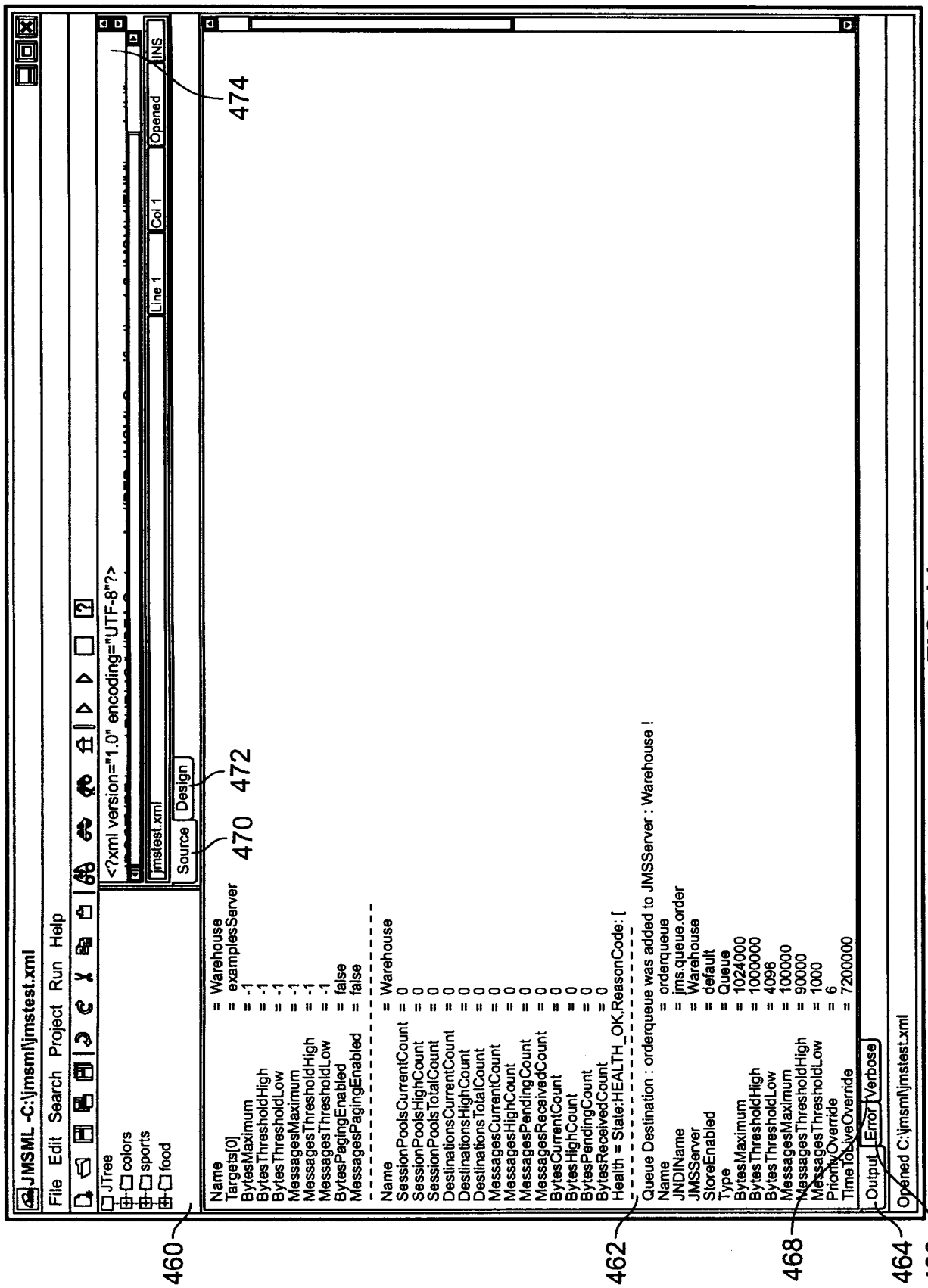
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
jmstest.xml
Source
Design
Line 1
Col 1
Opened
INS
<?xml version="1.0" encoding="UTF-8"?>
Name = Warehouse
Targets[0] = examplesServer
BytesMaximum = -1
BytesThresholdHigh = -1
BytesThresholdLow = -1
MessagesMaximum = -1
MessagesThresholdHigh = -1
MessagesThresholdLow = -1
BytesPagingEnabled = false
MessagesPagingEnabled = false
Name = Warehouse
SessionPoolsCurrentCount = 0
SessionPoolsHighCount = 0
SessionPoolsTotalCount = 0
DestinationsCurrentCount = 0
DestinationsHighCount = 0
DestinationsTotalCount = 0
MessagesCurrentCount = 0
MessagesHighCount = 0
MessagesPendingCount = 0
MessagesReceivedCount = 0
BytesCurrentCount = 0
BytesHighCount = 0
BytesPendingCount = 0
BytesReceivedCount = 0
Health = State:HEALTH_OK,ReasonCode: [
Queue Destination : orderqueue was added to JMSServer : Warehouse !
Name = orderqueue
JNDIName = jms.queue.order
JMSServer = Warehouse
StoreEnabled = default
Type = Queue
BytesMaximum = 1024000
BytesThresholdHigh = 1000000
BytesThresholdLow = 4096
MessagesMaximum = 100000
MessagesThresholdHigh = 90000
MessagesThresholdLow = 1000
PriorityOverride = 6
TimeToLiveOverride = 7200000
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
460
462
464
466
468
470
472
474

FIG. 14

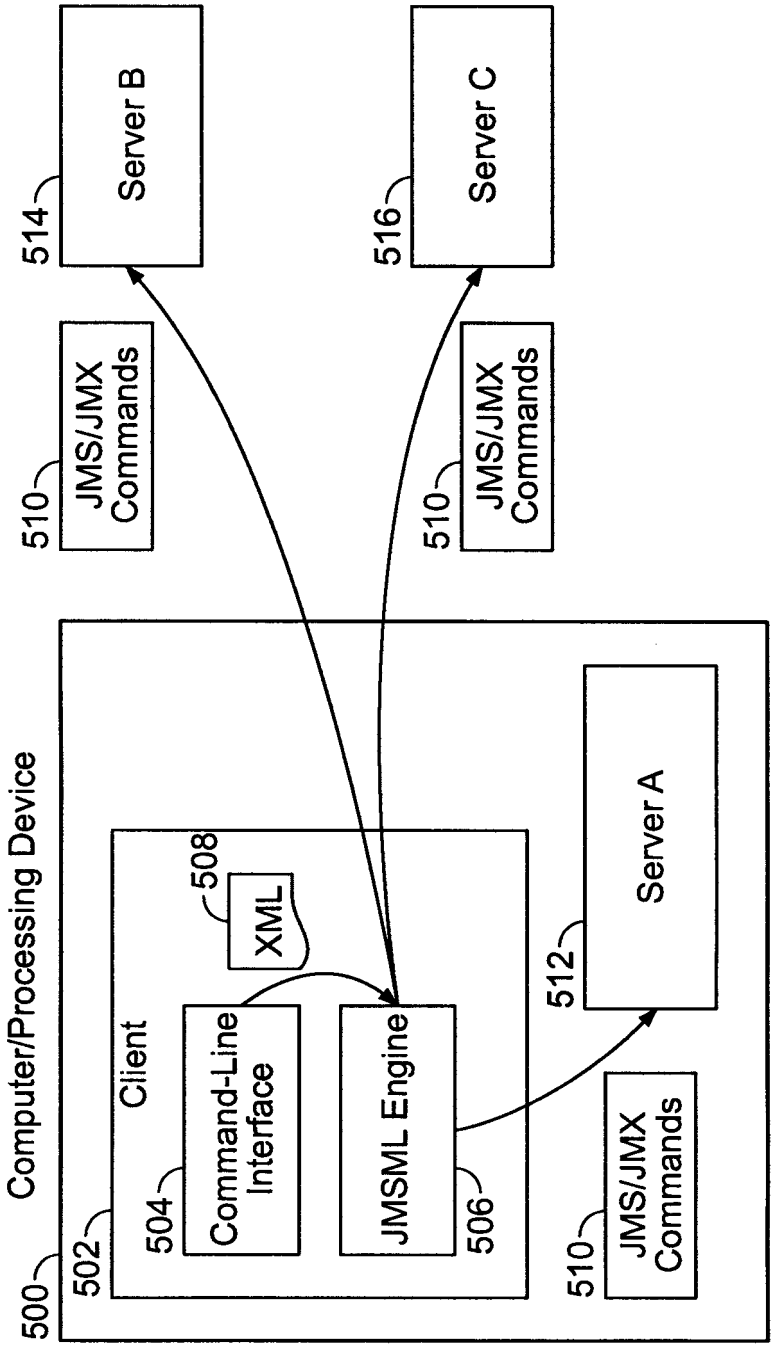
Server B
514
Server C
516
JMS/JMX Commands
510
JMS/JMX Commands
510
Computer/Processing Device
500
Client
502
508
XML
Command-Line Interface
504
JMSML Engine
506
Server A
512
JMS/JMX Commands
510

FIG. 15

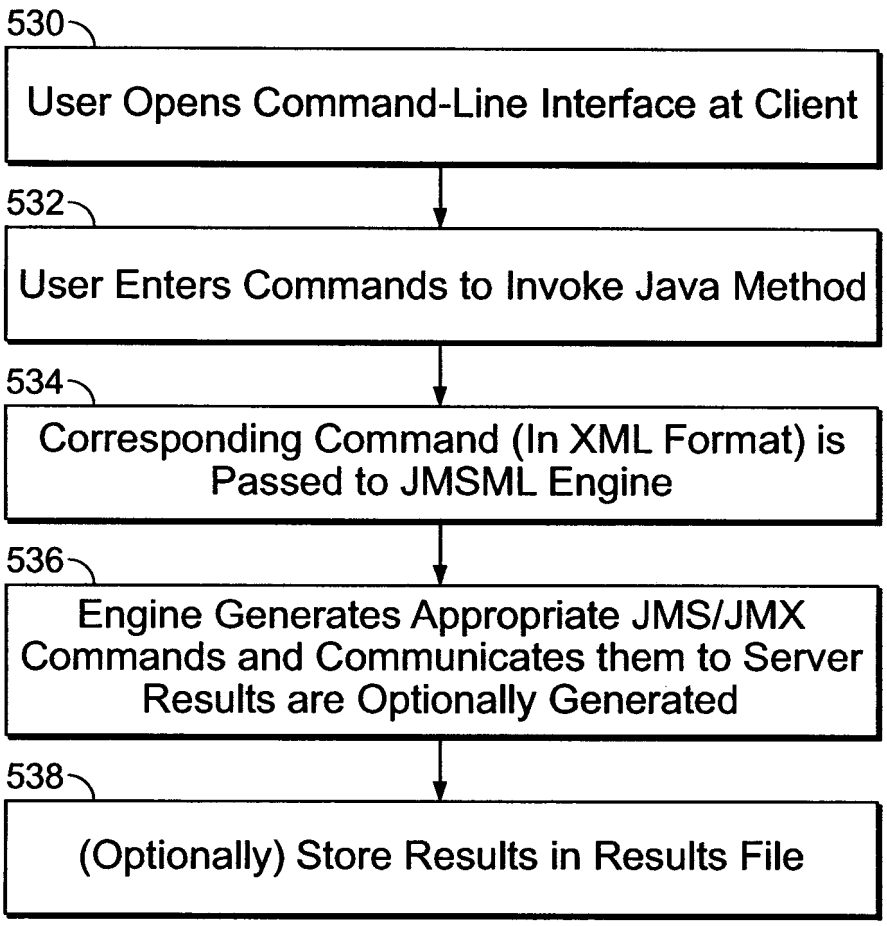
530
User Opens Command-Line Interface at Client
532
User Enters Commands to Invoke Java Method
534
Corresponding Command (In XML Format) is Passed to JMSML Engine
536
Engine Generates Appropriate JMS/JMX Commands and Communicates them to Server Results are Optionally Generated
538
(Optionally) Store Results in Results File

FIG. 16

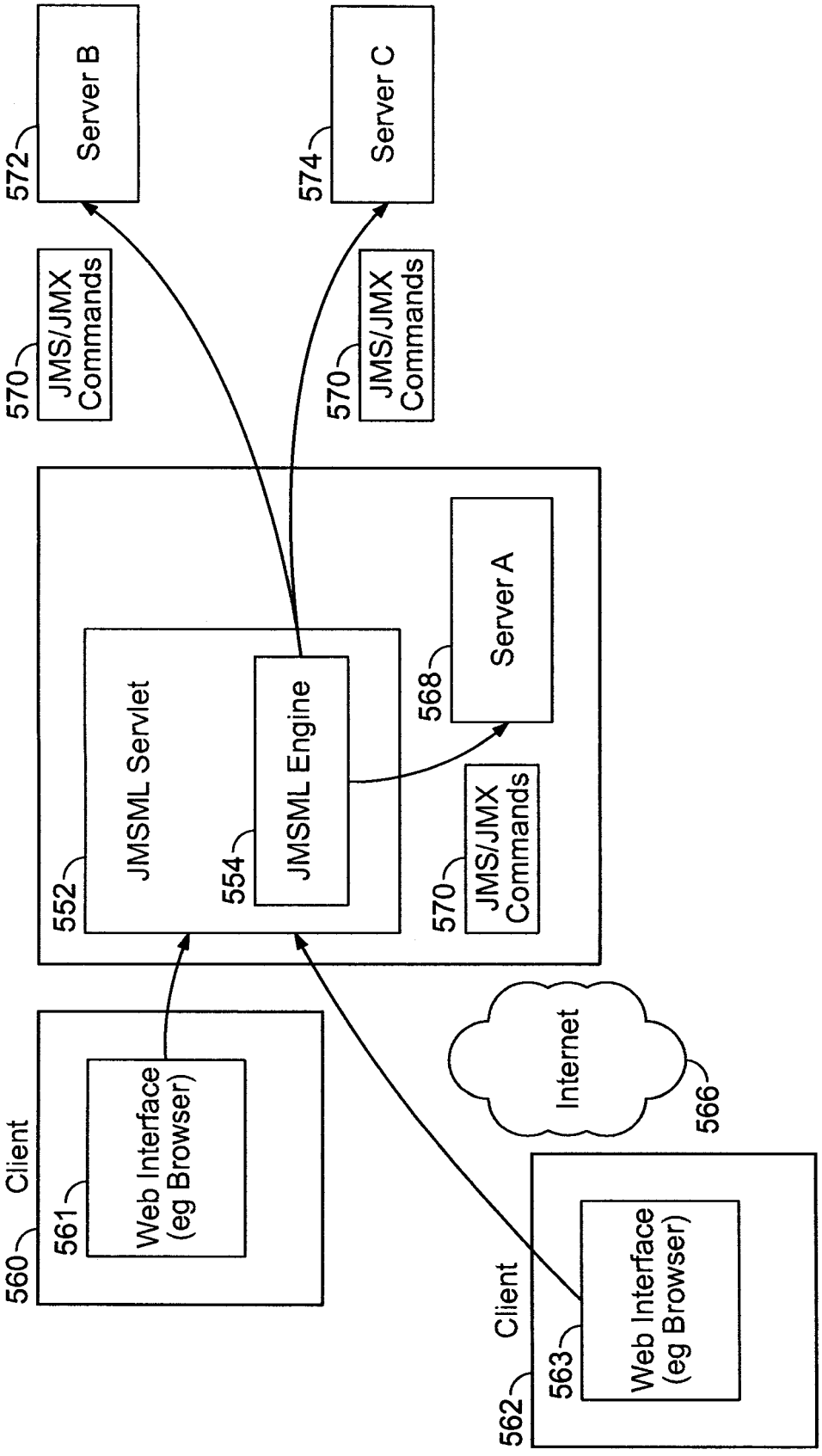
Server B
572
Server C
574
JMS/JMX Commands
570
JMS/JMX Commands
570
JMSML Servlet
552
JMSML Engine
554
Server A
568
JMS/JMX Commands
570
Internet
566
Client
560
Web Interface (eg Browser)
561
Client
562
Web Interface (eg Browser)
563

FIG. 17

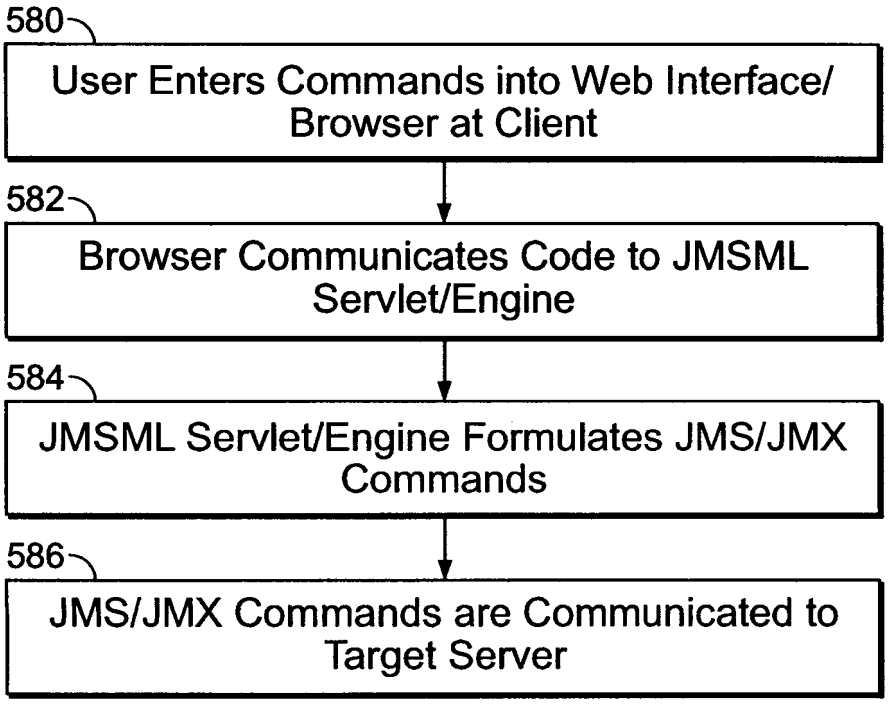
580
User Enters Commands into Web Interface/ Browser at Client
582
Browser Communicates Code to JMSML Servlet/Engine
584
JMSML Servlet/Engine Formulates JMS/JMX Commands
586
JMS/JMX Commands are Communicated to Target Server

FIG. 18

Title: COMMAND-LINE INTERFACE SYSTEM AND METHOD FOR JAVA MESSAGE SERVICE MARK-UP LANGUAGE
Inventors: Kathiravan Sengodan
Application No.: 10/601,929 Filing Date: June 23, 2003
Docket No.: BEAS-01351US3
Attorney: Karl F. Kenna Telephone No. (415) 362-3800

FIG. 19